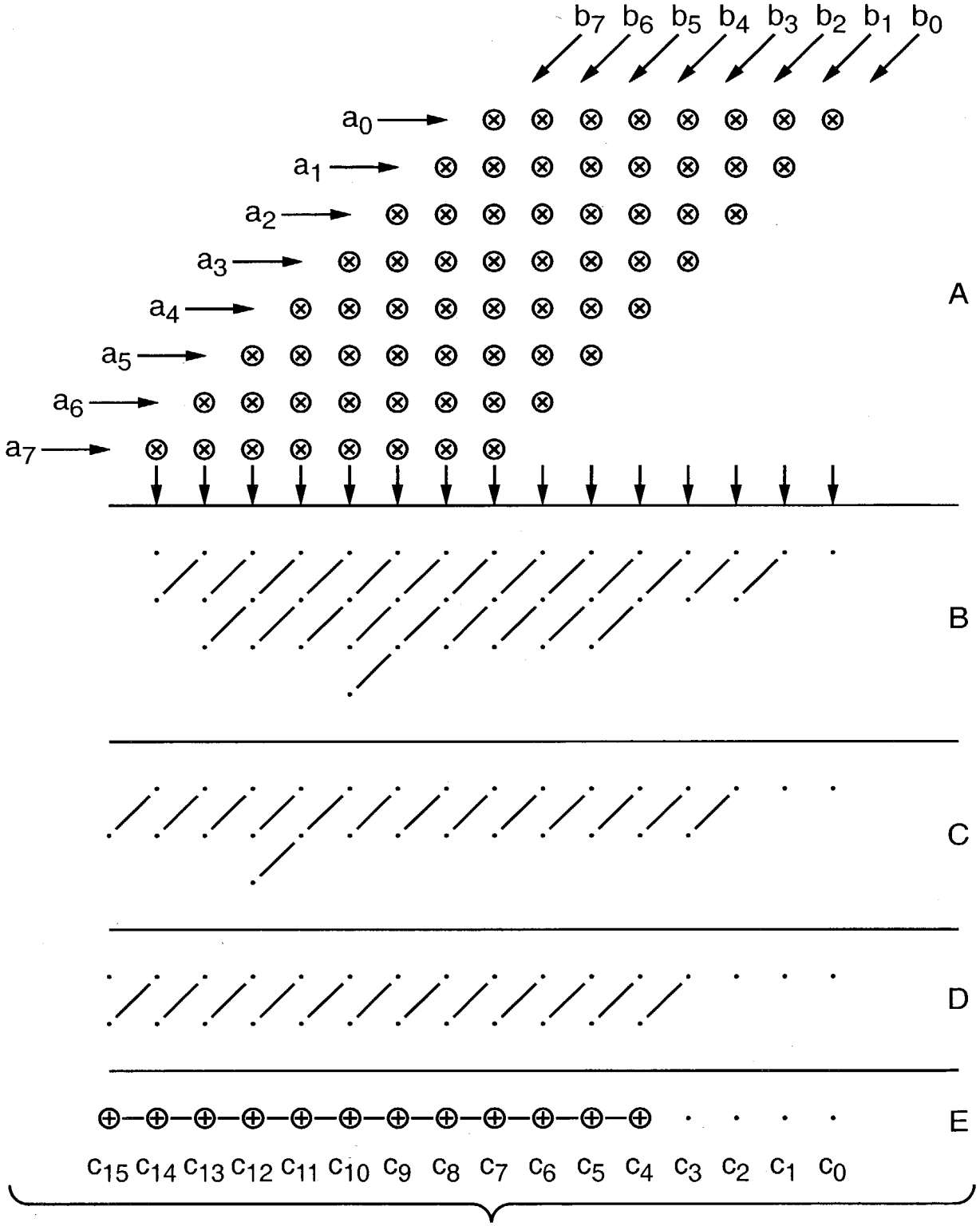

FIG._1
(PRIOR ART)

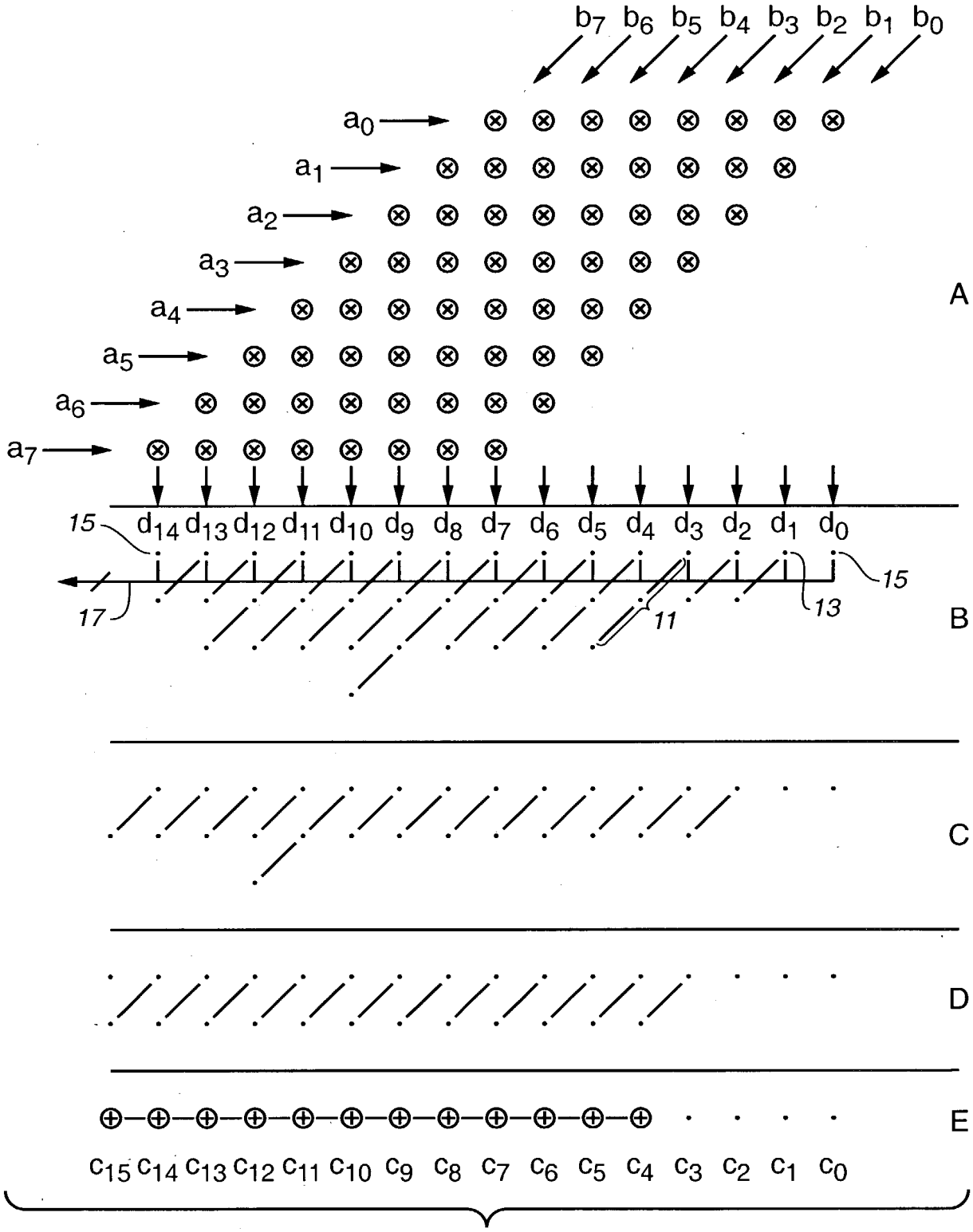
b7 b6 b5 b4 b3 b2 b1 b0
a0
a1
a2
a3
a4
a5
a6
a7
A
15
d14 d13 d12 d11 d10 d9 d8 d7 d6 d5 d4 d3 d2 d1 d0
15
17
11
13
B
C
D
E
c15 c14 c13 c12 c11 c10 c9 c8 c7 c6 c5 c4 c3 c2 c1 c0

FIG._2

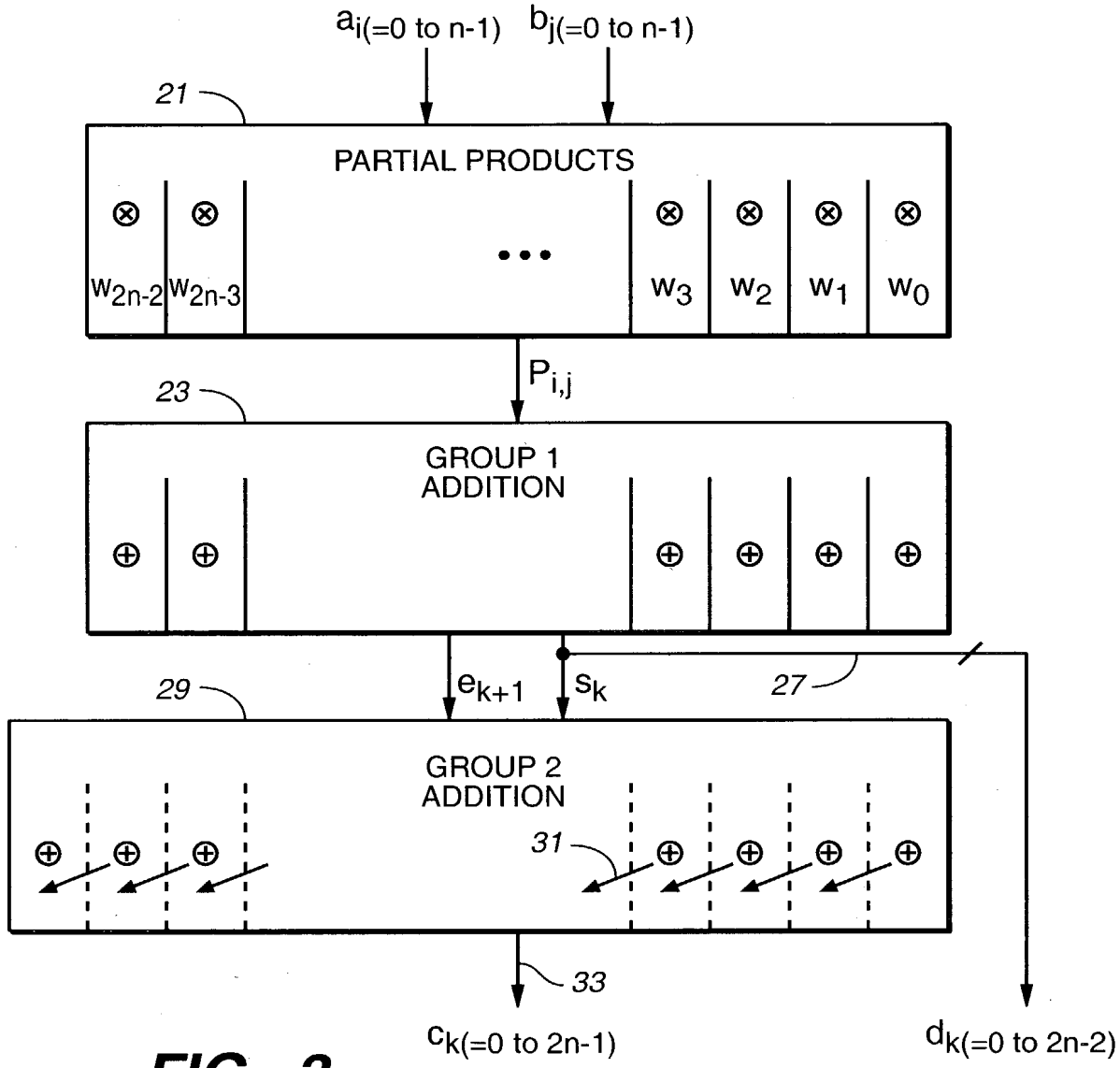
$a_{i(=0 \text{ to } n-1)}$
$b_{j(=0 \text{ to } n-1)}$
21
PARTIAL PRODUCTS
w_{2n-2}
w_{2n-3}
w_3
w_2
w_1
w_0
$P_{i,j}$
23
GROUP 1 ADDITION
e_{k+1}
s_k
27
29
GROUP 2 ADDITION
31
33
$c_{k(=0 \text{ to } 2n-1)}$
$d_{k(=0 \text{ to } 2n-2)}$

FIG._3

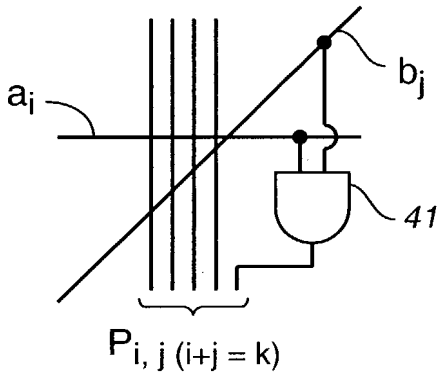
a_i
b_j
41
$P_{i,\ j\ (i+j\ =\ k)}$

FIG._4

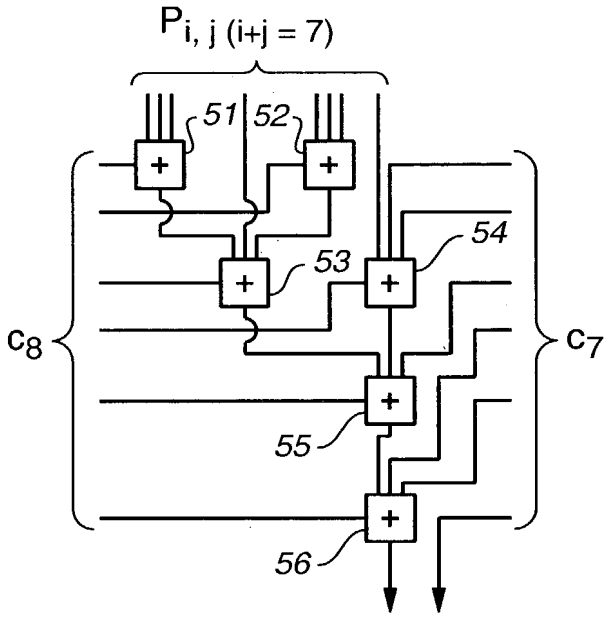

FIG._5
(PRIOR ART)

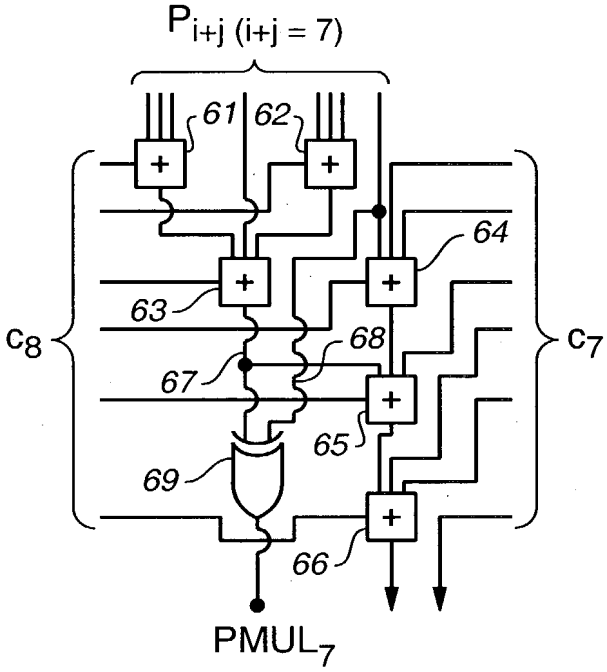

FIG._6

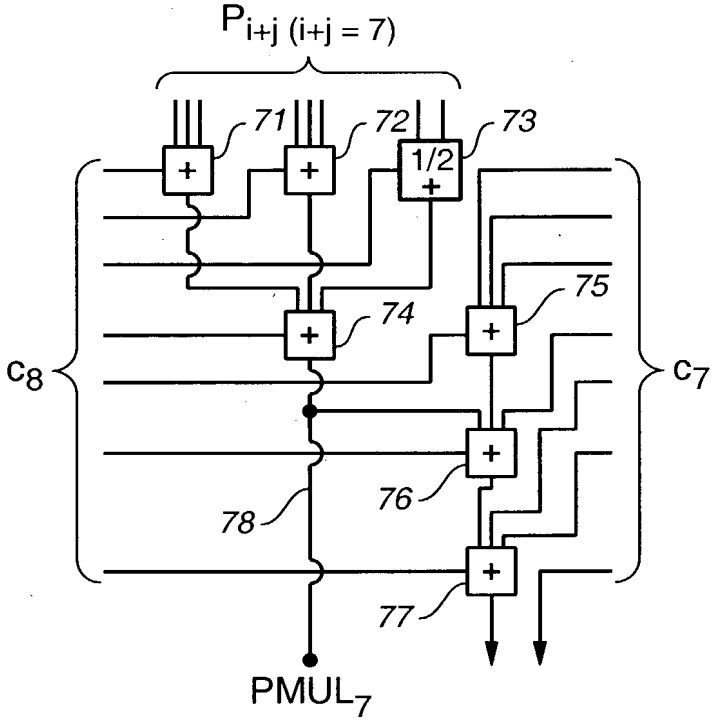

FIG._7

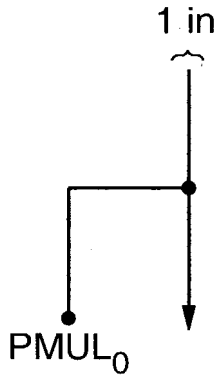

FIG._8A

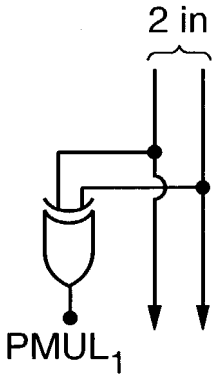

FIG._8B

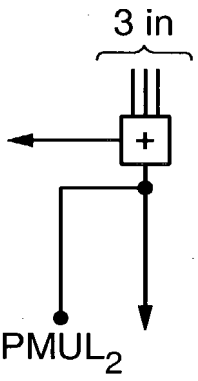

FIG._8C

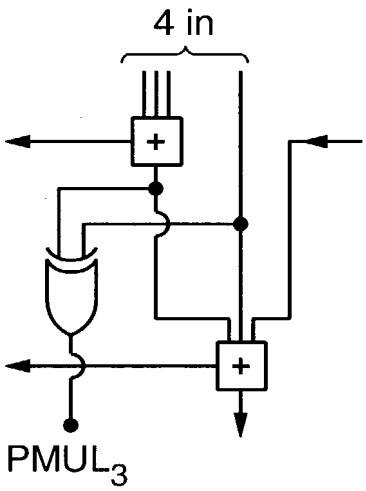

FIG._8D

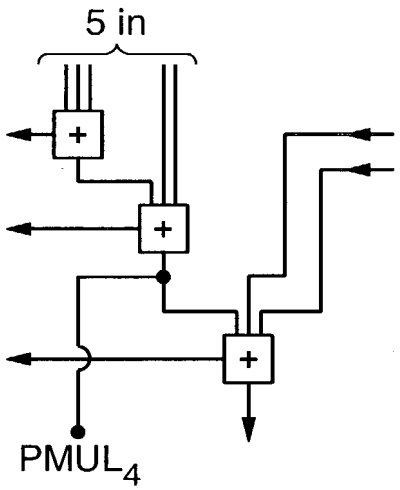

FIG._8E

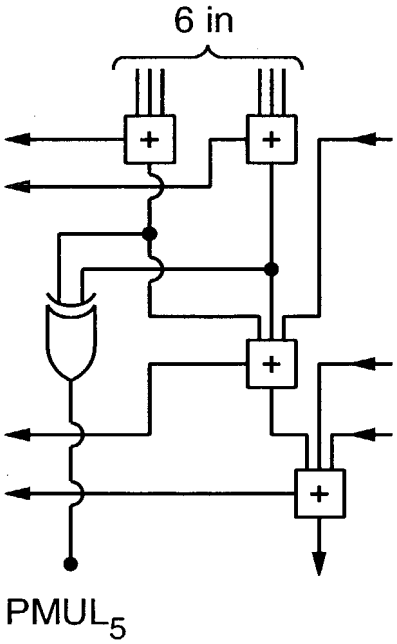

FIG._8F

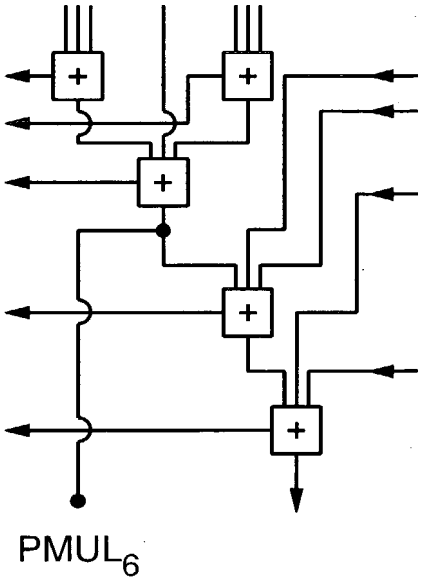

FIG._8G

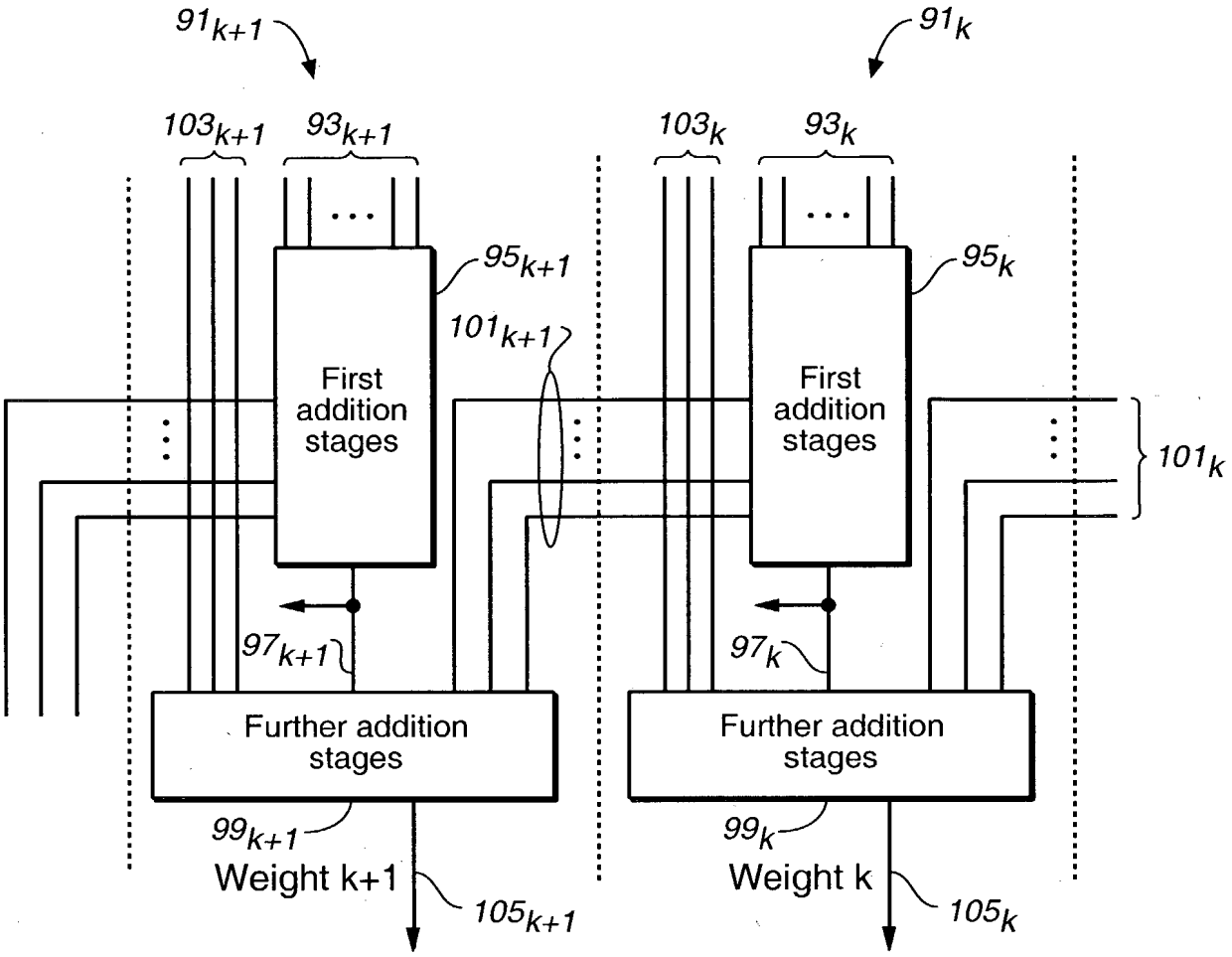
91_{k+1}
91_k
103_{k+1}
93_{k+1}
103_k
93_k
95_{k+1}
95_k
101_{k+1}
First addition stages
First addition stages
101_k
97_{k+1}
97_k
Further addition stages
Further addition stages
99_{k+1}
99_k
Weight k+1
Weight k
105_{k+1}
105_k

FIG._9